

**AMENDMENTS TO THE CLAIMS**

**Claims 1 - 4 (canceled).**

**Claim 5 (previously presented):** A vacuum degassing apparatus for removing dissolved gas from liquid, comprising:

a vacuum vessel including a gas permeation diaphragm;

an exhaust vacuum pump; and

a vacuum control system, the vacuum control system including:

a controller for monitoring the inside pressure of the vacuum vessel using a pressure sensor, and controlling a voltage applied to a DC brushless motor on the basis of an output signal resulting from measurement of the inside pressure of the vacuum vessel by the pressure sensor to control the displacement of the exhaust vacuum pump; and

an air introduction device inserted in a vacuum exhaust path connecting the vacuum vessel to the exhaust vacuum pump for continuously introducing a controlled amount of air externally supplied into the vacuum exhaust path, wherein

gas dissolved in the liquid is isolated with the gas permeation diaphragm by reducing the inside pressure of the vacuum vessel by operating the exhaust vacuum pump, and by operating the controller to hold the degree of vacuum in the vacuum vessel constant.

**Claim 6 (canceled).**

**Claim 7 (currently amended):** A vacuum degassing apparatus for removing dissolved gas from liquid, comprising:

a vacuum vessel including a gas permeation diaphragm;

an exhaust vacuum pump; and

a vacuum control system, the vacuum control system including:

a controller for monitoring the inside pressure of the vacuum vessel using a pressure sensor, and controlling a voltage applied to a DC brushless motor on the basis of an output signal resulting from measurement of the inside pressure of the vacuum vessel by the pressure sensor to control the displacement of the exhaust vacuum pump; and

an air introduction device inserted in a vacuum exhaust path connecting the vacuum vessel to the exhaust vacuum pump for continuously introducing a controlled amount of air externally supplied into the vacuum exhaust path. ~~The vacuum degassing apparatus according to claim 5, wherein~~ the air introduction device comprising ~~comprises~~ a constant circulation resistance tube which is formed by coaxially inserting a resistance adjusting rod into a hollow capillary and which can control a flow rate of gas circulating between an inner circumference of the hollow capillary and an outer circumference of the resistance adjusting rod by adjusting a circulation resistance of the gas,

wherein gas dissolved in the liquid is isolated with the gas permeation diaphragm by reducing the inside pressure of the vacuum vessel by operating the exhaust vacuum pump, and by operating the controller to hold the degree of vacuum in the vacuum vessel constant, and

wherein the circulation resistance of the externally-supplied air can be adjusted by varying an insertion length of the resistance adjusting rod inserted into the hollow capillary and can be fixed by fitting a separation preventing short tube to an outer circumference of the hollow capillary at an opening end.

**Claims 8, 9 (canceled).**